Wetlands Permit 08-42

2008

ENVIRONMENTAL SPECIALTIES GROUP, INC.

December 10, 2008

Virginia Marine Resources Commission
Attn: Ben McGinnis
2600 Washington Ave.
Third Floor
Newport News, Virginia 23607

Virginia Dept. of Environmental Quality
Tidewater Office
Attn: Mark Kalnins
5636 Southern Boulevard
Virginia Beach, Virginia 23462

U.S. Army Corps of Engineers
Regulatory Branch
Attn: Peter Kube
803 Front Street
Norfolk, Virginia 23510

Poquoson Wetlands Board
Attn: Karen Holloway
500 City Hall Avenue
Poquoson, VA 23662

York County Wetlands Board
Attn: Anna Drake
105 Service Drive
York County, Virginia 23690

RE: Oakmoore Joint Permit Application, Poquoson, Virginia
VMRC # 08-1276
COE # 08-2079-prk
ESG Project Number: 7604

Dear Regulatory Agencies:

The following letter addresses each of the agency response letters we have received to date concerning the Oakmoore project in Poquoson, Virginia. Each agency's concerns are addressed individually. Each concern is stated as presented in the agency comment letter and is then followed by the Oakmoore team's response. This summary letter of agency concerns and responses is being sent to each regulatory agency so that all agencies have the same information and documentation.

7604-rec-h98

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Virginia Marine Resources Commission, letter dated July 28, 2008

In a letter dated July 28, 2008, the Virginia Marine Resources Commission stated that provided work is performed landward of the mean low water line, no authorization is required from the Commission.

U.S. Army Corps of Engineers, letter dated July 28, 2008

1. Federal regulations require that you evaluate all direct, secondary, and indirect impacts resulting from the proposal. Stormwater management facilities, either temporary or permanent, may negatively affect the hydrology of residual aquatic resources. The proposed construction of the retention pond may negatively impact forested wetlands due to drainage that may occur as a result of the construction and operation of the site retention facility. Also, wetlands in the vicinity of the proposed concrete lined ditch may incur secondary impacts due to drainage and adjacent land disturbance. Please assess whether secondary impacts to wetlands may incur and if the compensatory wetland mitigation plan needs to be revised.

Attached is a report from Mr. Camille Kattan of GET Solutions, Inc. that describes his supplementary subsurface investigation along the interface between the wetlands and the southern perimeter of the proposed retention pond. Considering the nearly impermeable clay soils encountered and a relatively shallow groundwater level, it is his professional opinion that no significant subsurface or surface drainage from the adjacent wetlands into the retention pond will occur. Therefore, the proposed retention pond will not result in secondary impacts, such as the draining of the surrounding wetland area.

The proposed concrete lined ditch shown on the western subdivision boundary, between impact areas 'A' and 'G' will not cause additional secondary impacts to wetlands. The revised plans for this area (see attached) show that the ditch side closest to the wetlands will have concrete extending to the elevation of the top of bank, therefore eliminating the possibility of subsurface water flow into the ditch. There will be a culvert located under the proposed road crossing to maintain wetland connectivity. The elevations are relatively flat in this wetland area, so there is only a minimal amount of "flow", if any. Therefore, the proposed road crossing will not result in secondary impacts to the surrounding wetland area.

2. Please clearly show temporarily impacted wetlands on project plans. The JPA indicates that these temporarily impacted wetlands will be restored to grade, however it is not clear whether these areas will be converted from the forested to a non-forested condition. Will these areas be fully restored via vegetative re-establishment.

These temporarily impacted wetland areas have been highlighted on the current set of drawings included with this response. These areas will be returned to grade and be restored by vegetative re-establishment.

3. Generally low impact development (LID) measures should be incorporated in both commercial and small lot residential developments. Please evaluate if LID measures can be incorporated into the design of the project, to among other benefits, reduce the size of the pond.

In a team meeting held with the City of Poquoson, Ellen Roberts, the City Engineer evaluating this project, agreed with the project team that due to the characteristics of the soils and the high groundwater table on-site, additional LID measures such as grass swales and bioretention basins would not be feasible. However, as discussed later in this letter, a Petraflex type paver will be used to stabilize the Westover Shores outfall drainage ditch leading to Lamb's Creek which will further improve the environmental quality of this feature.

4. A 3,400 sf wetland area is proposed to be filled for the construction of a berm adjacent to the retention pond. Associated with this work is the mechanical clearing and excavation of 14,630 sf of forested wetland for retention pond construction. This area of proposed work should be added into the total wetland impact requiring compensatory mitigation. The term discharge of dredged material is defined as "any addition, including any redeposit, of dredged material, including excavated material into waters of the United States which is incidental to any activity including mechanized landclearing, ditching, channelization, or other excavation (33 CFR Part 232.2 (1) (iii)).

The 14,630 sf of excavation of the forested wetland for retention pond construction has been added to the total impact numbers.

5. Impacts to the wetland finger proposed to be filled for the swing set in the eastern playground can be avoided. The swing set can be located in the proposed flower garden and the wetlands avoided. The proposed walkway can be elevated on pilings where it crosses wetlands.

Revisions have been made to the proposed wetland impacts for the eastern playground. The original Impact H has been deleted from the plan resulting in no impact to the wetland area. **(Please note**: remaining proposed project impacts have been renumbered beginning with a new Impact H). The playground equipment will be located in the adjacent upland area. A foot bridge will be constructed across the wetland swale so that children can move from one upland play area to the other. The wetland area under the footbridge will not be filled as the toe of the appropriate fill slope will cease on the landward (western) side of the footbridge. However, wetlands will still be impacted where Lot 61 is located in order to gain a usable lot and appropriate fill slope.

6. The 404 (b) (1) guidelines require that wetland impacts be avoided where possible. Wetland impacts should next be minimized to the greatest extent practicable. Finally, compensation of lost wetland function and value should be provided for all unavoidable wetland impacts.

Your mitigation plan includes a donation to the Virginia Aquatic Resources Trust Fund, payment to a mitigation bank, and preservation of 12.3 acres of wetlands at a 10:1 ratio. However, for preservation to have value as compensatory mitigation, the resource being preserved must be at risk (development, timbering, mining, etc). Your development plan shows what you consider to be the least environmentally damaging, practicable alternative. Your plan demonstrates that the project purpose may be fulfilled without additional filling of avoided wetlands. Consequently, the 12.3 acres of avoided wetlands are at little development risk. Therefore, the compensatory mitigation value of preserving these onsite resources at a 10:1 ratio, does not replace the function and value lost by filling over an acre of forested wetland on-site. Please adjust your mitigation plan accordingly to make up for the additional wetlands requiring adequate mitigation.

In a letter dated September 23, 2008 (attached), Mr. D. Wayne Moore, the City Attorney for the City of Poquoson, stated that there are no City of Poquoson Ordinances limiting the right to log the Oakmoore property, including logging in wetlands in the proposed preservation area. In order to maximize the use of the remaining acreage, the Oakmoore Partners can log the area that has been proposed as preservation. The proposed preservation area is therefore under threat due to the potential for authorized timbering activities. Due to this threat, the proposed mitigation plan still includes the preservation of 14.1 acres at a 10:1 ratio with the remaining mitigation balance being paid into the Trust Fund.

Virginia Department of Environmental Quality, letter dated July 23, 2008

1. While temporary impacts due to the utility installation (i.e. stormwater sewer and sanitary sewer) have been shown in the JPA impacts summary, the temporary impact areas have not been clearly demarcated on the project plans. Please provide a depiction which clearly demarcates the areas to be temporarily impacted. Please also describe whether these areas will be fully restored via vegetative re-establishment. While the JPA narrative reports these temporarily impacted areas will be restored to grade, it is not clear whether these areas will be mowed or otherwise converted from a forested condition to a non-forested condition.

The temporarily impacted wetland areas have been highlighted on the current set of drawings included with this response. These areas will be returned to grade and be restored by vegetative re-establishment. It is not anticipated that these areas will be maintained by mowing.

2. Project drawings submitted with the application show proposed construction activities adjacent to wetlands, which may result in secondary impacts to wetlands. In particular, additional impacts to forested wetlands due to drainage may occur as a result of excavating the site retention pond. Project drawings show the pond as having a bottom elevation of -21+/-, and a Normal Water Surface Elevation of 5.2, while the

adjacent wetlands are shown as having a surface elevation of 7 to 8 (vertical datum not provided).

Also wetlands in the vicinity of the proposed concrete-lined ditch shown on the western subdivision boundary, between impact areas 'A' and 'G', may also incur secondary impact due to drainage and adjacent land disturbance. Please assess whether the above referenced wetlands areas will incur secondary impacts, and whether an associated loss of wetlands function can be expected. If so, please revise the proposed impact summary and compensatory mitigation plan accordingly.

Attached is a report from Mr. Camille Kattan of GET Solutions, Inc. that describes his supplementary subsurface investigation along the interface between the wetlands and the southern perimeter of the proposed retention pond. Considering the nearly impermeable clay soils encountered and a relatively shallow ground water level, it is his professional opinion that no significant subsurface or surface drainage from the adjacent wetlands into the retention pond will occur. Therefore, the proposed retention pond will not result in secondary impacts, including drainage of the surrounding wetland area.

The proposed concrete-lined ditch shown on the western subdivision boundary, between impact areas 'A' and 'G' will not cause additional secondary impacts to wetlands. The revised plans for this area show that the ditch side closest to the wetlands will have concrete extending to the elevation of the top of bank, therefore eliminating the possibility of subsurface water flow into the ditch. There will be a culvert located under the proposed road crossing to maintain wetland connectivity. The elevations are relatively flat in this wetland area, so there is only a minimal amount of "flow", if any. Therefore, the proposed road crossing will not result in secondary impacts to the surrounding wetland area.

3. As compensation for the proposed direct impacts to 1.19 acres of forested wetlands due to excavation and filling, you have proposed to provide 1.70 acres of compensation. According to your plan, this compensation will be provided in part via on-site preservation of 14.1 acres of avoided forested wetlands, which would provide 1.41 mitigation credits when assessed at a 10:1 preservation to credit ratio. The remainder of the 0.29 mitigation credits will be provided through a corresponding contribution to the Virginia Aquatic Resources Trust Fund. This conceptual compensatory mitigation plan does not appear to fulfill the requirements established in the VWP Regulations. In accordance with 9VAC25-210-116.A., compensatory mitigation shall be sufficient to achieve no net loss of existing wetland acreage and no net loss of functions in all surface waters. Compensatory mitigation ratios appropriate for the type of aquatic resource impacted shall be applied to meet this requirement. A 2:1 ratio is typically required for impacts to forested wetlands (i.e. 2.38 mitigation credits required for the proposed direct impacts to 1.19 acres of forested wetlands). The proposed compensation does not provide for the 1:1 no net loss of acreage requirement, nor does it meet the no net loss of functions requirement. Please revise the compensatory

mitigation plan such that it satisfies the above requirements for all surface waters impacts associated with the project.

The revised compensatory mitigation plan is as follows:

The 14,630 sf of excavation from the construction of the on-site BMP has been added to the mitigation totals, bringing the total impact acreage of PFO wetlands to 1.1 acres. Impact H has been removed, reducing the acreage by 0.01 ac. At a 2:1 ratio, 2.2 acres will be required to be mitigated which will be achieved through the preservation of 14.1 acres of existing wetlands that are under threat due to potential logging, yielding 1.41 acres of mitigation credits. The remaining 0.79 acres will be mitigated through a donation to the Virginia Aquatic Resources Trust Fund.

4. As compensation for the proposed impacts to 0.17 acres of tidal waters, you have proposed to purchase tidal mitigation credits from the Chesapeake Land Development Tidal Wetlands Bank in Chesapeake, Virginia. Please note, this bank is not within the HUC for the impact site (02080108), nor in an adjacent HUC in the same river watershed. As such, the proposal does not meet the requirements established in § 62.1-44.15:5E of the Code of Virginia, which only allows the use of mitigation banks in the same HUC or adjacent HUC in the same river watershed as the proposed impacts. Please revise the compensatory mitigation plan accordingly.

The Chesapeake Tidal Mitigation Bank was originally selected to mitigate for the project's tidal impacts because it is the only tidal mitigation bank in existence. It was stated during our joint site visit on July 24, 2008 that VDEQ did not know whether the Virginia Aquatic Resources Trust Fund would accept a payment into the Trust Fund for mitigation for non-vegetated tidal mudflats. ESG is waiting for a response from VDEQ as to whether or not the Trust Fund will allow this payment.

5. In accordance with 9VAC25-210-80.B.1.n, provide the appropriate application processing fee. A permit application fee of $2,400 is required for the proposed impacts to 1.36 acres of surface waters.

The permit fee will be paid by the applicant after VDEQ's concerns have been addressed and permit issuance is anticipated.

City of Poquoson Wetlands Board, letter dated August 5, 2008

1. Pay $200 application fee.

The application fee is attached to this letter.

2. It is the City's policy to deny creation of new wetlands that could impact adjacent property owners by imposing additional RPA features on their properties. How do you propose to prevent these impacts to adjacent property owners?

There are no vegetated wetlands associated with the Westover Shores ditch. The only vegetation is found along the side-slopes of the ditch and is comprised of maintained upland yard grasses. This man-made ditch through uplands is currently tidally influenced through a majority of the ditch, with the existing RPA extending to the existing piped segment. The proposed deepening of the ditch will only horizontally extend tidal waters further into the existing piped segment. The topography of the ditch is very limited with only a minimal rise in elevation of the ditch along its approximate 700 ft length. The proposed deepening of the ditch will only result in the further horizontal extension of tidal water into the existing and proposed replacement pipe. The deepening of the ditch will not result in a broader RPA feature that would in turn result in a wider RPA buffer extent on properties adjacent to the ditch.

In general, the reason for including a 100 ft buffer area from an RPA feature is that it will result in the removal of no less than 75 percent of sediments and 40 percent of nutrients from post-development stormwater runoff and that it will retard runoff, prevent erosion and filter nonpoint source pollution. By that very statement, a piped stormwater conveyance should not be included as an RPA feature as it does not provide any of these criteria. Therefore there will be no increase to the existing RPA.

Research has been conducted by the project team to determine the original ditch grade/specifications, but due to the age of the Westover Shores subdivision which was built in the 1970s, no information has been found. The proposed redevelopment is an improvement over the existing state of the ditch. As the site plan calls for a stormwater BMP in the proposed subdivision, water quality will be improved. The pre-existing pollutant load is 22.24 pounds per year while the post-development pollutant load is 43.29 pounds per year, resulting in a difference of 21.05 pounds per year. The proposed pond will remove 22.23 pounds of pollutant load per year, reducing the pre-existing pollutant load to 21.06 pounds per year. Thus the stormwater that will be received in the Westover Shores ditch will be treated by the BMP pond prior to entering the ditch and therefore prior to entering Lamb's Creek. The larger pipe is also necessary to achieve positive drainage from the BMP.

3. Based on the plan view drawing, it appears that excavation activity and fill will extend into York County. Therefore, a wetlands permit will be required from York County's Wetlands Board as well as Poquoson's. Please correct on page 7 of the application accordingly.

A copy of the Oakmoore Joint Permit Application was sent to Anna Drake of the York County Wetlands Board for review when the revised application was submitted in July 2008. The York County Wetlands Board has responded with comments in a letter dated August 13, 2008. The correct box has been checked on page 7 of the JPA to show that this project occurs in two jurisdictions. The revised page is attached.

4. Please correct narratives entitled "Impact I/J" and "Avoidance and Minimization" to note that the City of Poquoson did not require that the tidal ditch become paved.

In a letter dated July 20, 2007 from Deborah Vest, Community Development Coordinator of the City of Poquoson, the City does require that the ditch be paved.

"The City will not accept earthen ditches with less than 0.50% slope. If you choose to alter or disturb an existing earthen ditch, it must be steepened to a 0.50% slope. If you cannot achieve this slope steepness, the ditch must be paved. As stated in earlier comments, paved ditches must be designed with a 0.30% slope. The only exception to this standard is if the paved ditch is receiving off-site drainage at its upstream end and outfalls into an existing body of water or existing drainage feature with an elevation that prevents the 0.3% slope. In that instance, the City has allowed developers to go as flat as a 0.12% slope. Slopes flatter than 0.12% have not and will not be allowed. Please recall that the City's concern with overly flat drainage features is not new, and that we have discussed this issue for several years."

At a recent project meeting with the City, it was revealed that a sentence was missing from the above statement. This is the standard statement from the City regarding ditch slopes; however, it doesn't apply to ditches containing wetlands. It was also noted at the meeting that the Wetlands Board will not likely approve a ditch that is proposed to be concrete lined. The narrative titled "Impact I/J and Avoidance and Minimization" has been corrected to note that the City did not require the ditch to be paved (revised narrative attached).

As stated previously in this summary response, stormwater leaving the Oakmoore site will be collected in a BMP pond for water quality treatment. Upon leaving the pond, it will exit the project site through an existing ditch located adjacent to the Westover Shores subdivision and then into Lamb's Creek. Overall pollutant loading will be reduced from pre-development load calculations. However, to further enhance the quality of stormwater leaving the site and to provide a stable and manageable ditch configuration, a Petraflex type of paver will be used in the bottom of the ditch after it has been deepened. A slope stabilization fabric will be used on the upper side slopes for further protection and stabilization. The Petraflex/fabric stabilization system will allow for further sediment entrapment, the opportunity for wetland grasses to grow between the paver cells and provide for overall ditch bank and slope stabilization. Revised graphics depicting this stabilization system are included with this summary response.

5. Impact nos. I & J report a 7,200 square foot impact area; however, it appears that the actual impact should be 7,405 square feet. Please correct on Impact Table.

In a telephone conversation with Mrs. Karen Holloway it was decided that the 7,200 sf figure was correct. ESG explained to Mrs. Holloway that the 7,200 sf figure was provided by the project engineer, PHR&A, and was then converted to an acreage number, which was then rounded to achieve the 0.17 ac figure.

6. Please note that the mitigation for impacts within Poquoson must take place within Poquoson's watershed.

It is proposed by the project team that two parcels located along Ridge Road in Poquoson, Virginia (location map attached) be used to satisfy the City's requirement that impacts to tidal, non-vegetated wetlands within the Westover Shores ditch be mitigated within the City limits. The two parcels contain approximately 4.2 acres of tidal wetlands, adjacent wetlands and upland areas. A conservation easement can be placed over a portion of the acreage to mitigate for unavoidable losses as a result of the Westover shores ditch improvements. Due to the location of the two parcels as well as other water features in the area, it is not anticipated that the proposed conservation easement area will result in an increase in Chesapeake Bay Protection Area buffers on surrounding properties. If the proposed conservation easement concept is acceptable to the City of Poquoson, the project team will move forward with specific plan development.

7. Show existing ditch boundaries in addition to proposed boundaries.

The ditch boundaries have been added to the revised permit application drawings and these drawings are attached.

8. For orientation purposes, please provide north arrow on cross section drawings.

It was agreed in a project meeting with the City that the north arrows do not need to be added to the cross section drawings.

York County Wetlands Board, letter dated August 13, 2008

1. The overwhelming majority of impacts occur in Poquoson: therefore, I strongly recommend that approval first be obtained from the City of Poquoson Planning Department and Poquoson Wetlands Board.

ESG is currently in the process of gaining approval from the City of Poquoson's Planning Department and Wetlands Board.

2. Because the construction will take place on property owned by the Old Port Cove Homeowner's Association (HOA) you must contact the HOA president, Ganapati Myneni at OPCHA, P.O. Box 8027, Yorktown, VA 23693 to discuss your project and garner their permission to work on their property. County staff will need permission to access the project site via York County property.

The Oakmoore Partners are in the process of coordinating with Mr. Myneni to gain permission to work within the easement owned by the Old Port Cove Homeowner's Association.

3. York County's right of way agent, Mike August, has determined that although the work is in a County easement, the County does not have the right of assignment for the easement. In order to tie into this easement, the developer must obtain an easement from the HOA with the County as a third party consenting to the use of the easement.

The Oakmoore Partners are in the process of coordinating with Mr. Myneni to obtain an easement from the HOA of the Old Port Cove subdivision.

4. The limits of the tidal wetlands and the improvements must be staked in the field for County verification and documentation. The stakes must be sufficient in number to determine the extent of the impacts to wetlands.

ESG will stake the limits of tidal wetlands in the field for verification and documentation by York County.

We feel that the responses presented above address each of the concerns raised by the agencies. However, if you have any additional questions or need any additional information, please feel free to contact me at any time. We look forward to the expeditious processing of the revised permit application.

Sincerely,

Julie C. Steele
President

Attachments:

GET Solutions, Inc. Report Dated August 28, 2008
Revised Impact Table
Revised Drawings Dated October 15, 2008, 9 Pages Total
Letter Dated September 23, 2008 from D. Wayne Moore, City Attorney, City of Poquoson
Revised JPA Page 7
Ridge Road Proposed Conservation Area Location Maps (2)
Revised Impact H/I Narrative Page
Revised Avoidance and Minimization Narrative Page
Revised Plan View Drawing (11 x 17 reduced size)
Revised Plan View Drawing (full scale)